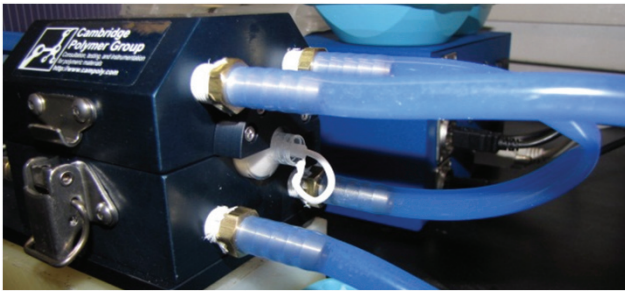
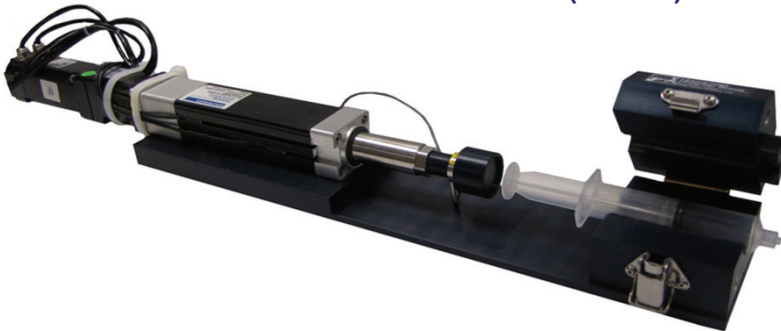


Routine determination of curing and gelation time

Summary

Determining “dough time” for bone cement is critical for the surgeon operatively, and providing that data on a routine quality control basis is currently complex and expensive. Traditionally, shear rheometers have been used to obtain quantitative information about cement curing, but these are complex to operate and expensive to maintain. There is therefore a need for a simple, cost effective tool for the measurement of viscosity of cements or other curing systems. The CPG Cement Extrusion Tester (CET™) is that instrument.

The CPG Cement Extrusion Tester (CET™)

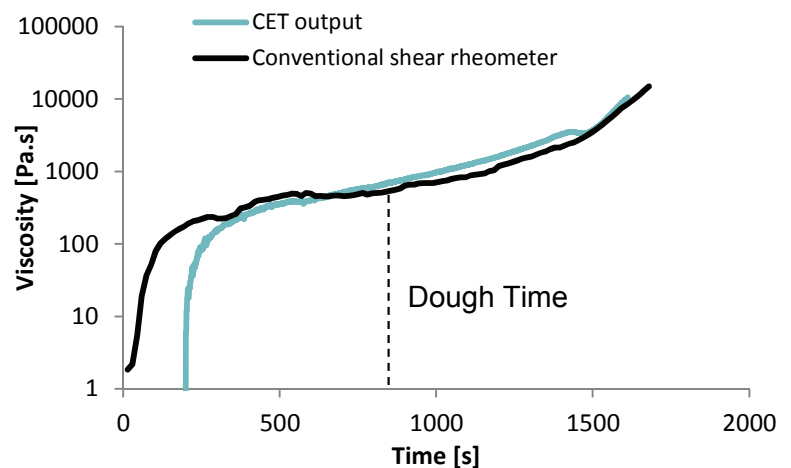


Description

The Cement Extrusion Tester (CET™) measures the force required to extrude a fluid from a standard disposable syringe at a wide range of speeds or shear rates, and calculates the instantaneous viscosity dynamically during the fluid's cure. The CET is easy to operate and clean up, provides high throughput, and delivers highly accurate viscosity measurements at a very low cost. Temperature control is possible for close control of reaction kinetics and increased throughput. The system is small and easily contained in a fume hood for testing of hazardous materials. The custom developed control software is suitable for quality control applications, or testing that requires more detailed analysis.

Specifications

Specification	Value
Size of tester (L x W x H)	610 x 150 x 150 mm
Size of control box (L x W x H)	460 x 250 x 100 mm
Wall shear rate (20 mL syringe)	~7 – 548 s ⁻¹
Viscosity (20 mL syringe)	50 – 5000 Pa.s



Markets

- Quality control
- Validation
- Biomedical materials testing
- General cement cure times



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Rev: 06/03/11

ANALYZE • RESEARCH • CREATE

Cambridge Polymer Group, Inc. is a contract research laboratory specializing in materials. We partner with our clients to solve problems utilizing our multi-disciplinary research team and full service laboratory.

We work with clients throughout the product life cycle to:

- **Develop new materials**
- **Design prototypes for proof-of-concept studies**
- **Create and execute experimental design**
- **Validate and verify manufacturing processes**
- **Perform root-cause analysis in product failures**

Cambridge Polymer Group, Inc. was founded in 1996 to provide a cost-effective resource for testing, research and development to clients who need periodic access to Ph.D.-level scientists and their support structure. We have developed a host of testing methods and materials for our clients, which number more than 300.



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